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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/027,115	12/20/2001	Donald E. Ackley	BVTP-P01-029	9722
28120	7590	06/17/2004	EXAMINER	
ROPER & GRAY LLP ONE INTERNATIONAL PLACE BOSTON, MA 02110-2624			NGUYEN, TUAN N	
			ART UNIT	PAPER NUMBER
			2828	

DATE MAILED: 06/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicati n N .

10/027,115

Applicant(s)

ACKLEY, DONALD E.

Examin r

Tuan N Nguyen

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 December 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12/20/2001; 05/07/2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 03/14/2002; 08/06/
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement filed 03/14/2002 and 08/06/2003 have been placed in the application file, and the information referred to therein has been considered as to the merits. See the attached, initialed copies.

Drawings

2. Preliminary amendment drawing submitted 05/07/2002 is accepted. New corrected drawings are required in this application because it is not acceptable to the draftsman, see the attached Notice of Draftsman drawing review

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or non-obviousness.

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4. Claims 1-3, 7, are rejected under 35 U.S.C. 103(a) as being unpatentable over Horwitz et al. (US 5371822).

With respect to claims 1,2, 7 Horwitz et al. '822 shows an optical device comprising: having a plurality of channels; and plurality of fibers inserted in the plurality of channels; and a plurality of optical components aligned and connected with the plurality of fibers, where the channels in micro. (Col 7: 15-35) (Col 9: 28-30) (Fig 4: 16a, 30, 28) (Fig 7: 30a/b, 98, 43). The claim further require the guiding means or the holder of the optic fiber is in needle form having channel for the fiber. It is within one skill in the art to recognize that any guiding means, holder, or in this case the microneedle containers holding the fibers with the intend to control/focus/align of the beam toward its intend target, such as the detectors in high accuracy. Since claim 7 recites the same or identical elements/limitations it is inherent to use patents ('822) to recite the method of forming an optical including a VCSEL array and a fiber array.

With respect to claim 3, Horwitz et al. '822 discloses the optical components are vertical cavity surface emitting laser (VCSEL) (Col 9: 28-30).

5. Claims 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Horwitz et al. (US 5371822) in view of Trezza (US 6447174).

With respect to claims 4-6 Horwitz et al. '822 disclosed the above, but did not discreetly disclose of the optical component photodetectors. It is within one skill in the art to recognize there are photodetectors within the VCSEL, in order the receive the signal from the laser fiber. Furthermore, Trezza (US 6447174) also disclosed the optical interconnect, showing optical fibers are inserted inside a plurality of channel guides, and connecting to the photodetector in the

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VCSEL (Fig 1: 13, 12, 20, 16). It would have been obvious to one of ordinary skill in the art to provide Suzuki '976 with the photodetectors as taught or suggested by Trezza '174, for the benefit of detect, measure, or transmitting the incoming signal.

Citation of Pertinent References

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Prausnitz et al. (US 6611707) shows the array of microneedle drug delivery device made from metal, ceramic, semiconductor, organics, polymer for guiding/aligning output.

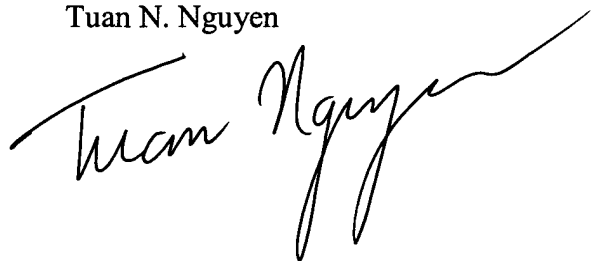
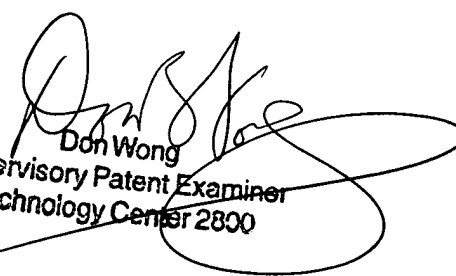
Communication Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan N Nguyen whose telephone number is (571) 272-1948. The examiner can normally be reached on Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on (571) 272-1834. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and (703) 872-9306 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-3329.

Tuan N. Nguyen

A handwritten signature in black ink, appearing to read "Tuan Nguyen", with a long, sweeping horizontal stroke extending to the right.A handwritten signature in black ink, appearing to read "Don Wong", with a large, circular flourish at the end.

Don Wong
Supervisory Patent Examiner
Technology Center 2800